

REMARKS

Claims 1-7 and 15-18 are pending in this application. By this Amendment, claim 1 is amended for clarification purposes only. No new matter has been added. Reconsideration of the application is respectfully requested.

The Office Action rejects claims 1-7 and 15-18 under 35 U.S.C. §102(b) over Sangeeta (U.S. Patent No. 6,395,406). The rejection is respectfully traversed.

In particular, Sangeeta does not disclose or suggest a method of forming a platinum aluminide diffusion barrier on a titanium alloy substrate that includes applying to the substrate a coating comprising particulate platinum and particulate aluminum in an organic carrier, and performing a reaction treatment by subjecting the platinum particles and the aluminum particles to a temperature in the range of about 200°C to about 600°C for a time sufficient for the reaction between the platinum and the aluminum to form a diffusion barrier on the substrate, as recited in independent claim 1.

Sangeeta teaches a method for preparing an aluminum alloy-containing coating composition (Abstract). The Office Action alleges that Sangeeta teaches the claimed heating temperature ranges (Office Action, page 2, lines 12-20). However, Sangeeta teaches that a heat treatment is carried out at a temperature in the range of about 800°C to about 1200°C, more specifically in the range of about 900°C to about 1000°C (col. 7, lines 27-30), or in the range of 1100°C to 1200°C (col. 10, lines 50-55). Moreover, although Sangeeta teaches a heating temperature of 100°C to about 400°C (col. 6, lines 61-63), this heating temperature is a heating for the "evaporation stage" and is only applied after the slurry mixture is deposited to "remove at least a portion of the volatile material contained therein, forming a substantially devolatilized coating," (col. 6, lines 48-50). Accordingly, the heating performed by Sangeeta that is in the range of 100°C to 400°C is performed after the slurry mixture is deposited and its purpose is only to remove a portion of the volatile material, not for the reaction between

the platinum and the aluminum to form a diffusion barrier on the substrate, as recited in independent claim 1. Thus, for at least these reasons, Sangeeta fails to disclose or suggest each and every feature of independent claim 1.

Furthermore, because Sangeeta teaches a method of forming a diffusion barrier layer by performing a reaction treatment in the range of about 800°C to 1200°C, Sangeeta does not limit the formation of α -case oxide as explained in the specification at, for example, page 12, lines 9-19. In other words, performing a heat treatment in the claimed range 200°C to 600°C may result in uncoated regions of the component being oxidized to a lesser degree than if the component was heated at a higher temperature such as the heating temperatures disclosed in Sangeeta of about 800°C to 1200°C. Accordingly, as uncoated regions of the component are oxidized to a lesser degree than if the component was raised at a higher temperature, the integrity of the component is retained and the formation of α -case oxide is reduced.

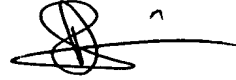
Finally, Sangeeta does not teach a titanium alloy substrate because Sangeeta merely teaches the use of "super alloys" and refers to U.S. Patent Nos. 5,399,313 and 4,116,723 which disclose titanium percentages of 3-4% and 1-5%, respectively. Accordingly, these super alloys cannot be defined as titanium alloys because of their very low titanium content.

For at least these reasons, Sangeeta fails to disclose or suggest each and every feature of independent claim 1. Thus, independent claim 1, and its dependent claims, are patentable over Sangeeta. Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. §102(b) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-7 and 15-18 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: March 14, 2006

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